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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/693,271 | 10/20/2000 | Donald C. Mann | ULT-001-1 | 7503 |

22888 7590 07/10/2009

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|---|---|
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2887 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 07/10/2009 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/693,271 | MANN ET AL. | |
| | Examiner | Art Unit | |
| | DANIEL WALSH | 2887 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *03 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,4-10,16,17,19,21-30,38 and 47-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-10,16,17,19,21-30,38 and 47-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 4-10, 16, 17, 19, 21-30, 38, 47-50 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 10 recite "in a manner compliant with ANSI/ISO/IEC hard disk drive standards". This phrase is vague/indefinite, since it is unclear what is meant by "manner compliant..." For purposes of Examination, the Examiner will interpret the limitation to mean that the data storage device is adapted to interact with a processing station in a manner compliant with the standards (re claim 1) to mean that the tracks of the storage are read via a head/processing station, and that re claim 10, that the signals are stored in tracks to be read by a head/processing station. The interpretation by the Examiner is believed to be a reasonable interpretation given the written limitations.

Appropriate clarification/correction is requested. The Examiner also makes note that the Applicant should take care to not raise any potential 112 1st or 2nd paragraph issues when addressing the above issue.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 4-10, 16-17, 19, 21-25, 27-28, 30, and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (US 2001/0052543) in view of Wood (US 5,041,922).

Re claim 1, Liu teaches a portable card adapted to be used in a card processing system having a data processing station comprising a data storage device adapted to interact with the data processing station when the portable processing station and card are moved relative to each other, a substrate having a generally rectangular shape, and magnetic material for storing signals such as disposed on an arcuate shaped track (FIG. 2d+). Though silent to high density/high coercivity material, it would have been obvious to one of ordinary skill in the art to use such a material, for its known benefits for increased data storage. Re the newly added limitation of the protective housing having at least one housing section that is movable relative to the data storage device such that the data storage device is shielded by said at least one housing section when said at least one housing section is in a first position, and said data storage device is operably exposed for interaction with the data processing station when said at least one housing is in a second

position, the Examiner notes that Liu teaches a protective housing (FIG. 3A-3B) that shields the data storage device in a first position and that exposes the device in a second position (when the card is removed). Though silent to the protective housing being movable, the Examiner notes that as it is a rack, it would have been obvious for the rack to be able to be moved, as it is merely a rack that holds several cards. Further, it appears to be consistent with that embodiment taught in applicants response (re Applicants FIG. 65) where the card/housing is movable relative to the card/housing.

Liu is silent to the protective coating as claimed.

Wood teaches magnetic storage for a disc/tape/etc. (interpreted as suitable for a card) and the protective coating having the claimed high density high coercivity material and the protective coating having a magnetically permeable magnetically saturable material (abstract), where the Examiner has interested both layers as forming the protective layer (13,14 form a protective layer). Though silent to being hard and abradable, a protective coating would obviously meet such limitations in order to further protect the card. The Examiner notes that the language regarding the selection of the thickness of the layer is not germane to the patentability of the device itself, and the prior art is interpreted to meet the structural limitations. Regardless, it would have been obvious to one of ordinary skill in the art to have a thickness that is not too thick to prevent signals but not too thing to be worn off, in order for the card and processing station to function, such selection of a range, where the general conditions of a claim are disclosed by the prior art, involves only routine skill in the art.

Re claims 4-9, the Examiner notes that such limitations regarding the orientation and number of tracks is believed to be taught by Liu, where the tracks are interpreted to extend

between the sides, are enclosed by the card and hence extend or are located centrally as claimed, and also Liu teaches the shape of the card, which is conventional in the art.

Re claims 10 and 16-17, the limitations have been discussed above.

Re claim 19, though the film 13 of Wood et al. is silent to being thin, the Examiner notes that it is taught as being plated or sputtered. Therefore, it would have been obvious for such methods to produce a thing film. One would have been motivated to have a thin film, for reduction in size/cost and the use of common manufacturing techniques.

Re claim 21, though silent to a non-magnetic friction reducing layer on one of the layers, the Examiner notes that cards are finished to have a smooth/non magnetic friction reducing layer to effect ease of use of the card, looks, and transporting it through a reader, and therefore such modification is an obvious expedient for such expected results. Such a layer can be interpreted as part of a protection layer as it imparts some protection inherently to the card.

Re claim 22, the Examiner notes that cards are interpreted as cleanable.

Re claim 23, a substrate is understood to have two surfaces, and as such, the protecting coating is therefore applied to one of them (directly or indirectly).

Re claims 24-25, though silent to a recording medium on both sides (which would necessitate the protection layer on both sides and hence meet the limitations), the Examiner notes those cards with magnetic storage on both sides are well known and conventional in the art. One would have been motivated to have such a card for increased data storage, to make orientation easier when reading, and to possibly store more than one account on a card.

Re claims 27-28 and 30, Wood teaches such limitations (claim 16 and FIG. 1), and it is conventional in the art for relative movement to enable data flow, such as conventional readers/cards employ.

Re claim 47-48, Wood teaches sputtering, as discussed above, as a means to easily form a thin layer. Though silent to plating, the Examiner notes plating is also a well known means to form a layer, and hence an obvious expedient to one of ordinary skill in the art to form a magnetic thin layer.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu with those of Wood.

One would have been motivated to do this to provide coatings, enable data flow, employ conventional processing techniques, etc. to provide expected results of a durable, easy to use, reliable card.

Re claim 1, though silent to the data storage device/substrate being bendable, the Examiner notes that Liu teaches the card can be of plastic and dimensioned to match a credit card. Therefore, as credit cards are plastic/rectangular and flexible, the art is believed to teach the bendable substrate limitations. It would have been obvious to one of ordinary skill in the art, to use a known technique of flexible/bendable plastic cards with the teachings of Liu in order to have a data card with flexibility/bendability, which can contribute to durability (without snapping when undergoing some stress). Though silent to the data storage device adapted to interact with the data processing station in a manner compliant with ANSI/ISO/IEC had disk drive standards, as discussed above, the data storage device is interpreted as having a magnetic material layer disposed along an arcuate shaped track on said substrate. Therefore, when the

arcuate tracks of the card are read, this is interpreted as "in a manner compliant with ANSI/ISO/IEC hard disk drive standards", since this is the manner in which hard disk drives are read (tracks are read).

Re claim 10, though silent to storing magnetic signals in a manner compliant with ANSI/ISO/IEC standards, the Examiner notes that the magnetic signals of Liu are stored/written to tracks, for example. Storing/writing to tracks of a data storage card is a manner that is compliant with ANSI/ISO/IEC standards, as credit cards have magnetic signals written/stored to tracks. As the claims are sufficiently broad, they do not recite what "a manner compliant" refers to. For purposes of Examination, the Examiner has interpreted that as the teachings of Liu teach writing/storing signals to tracks, this is a manner of for storing magnetic signals that is compliant with (how) magnetic signals are stored for compliant credit cards, as known in the art. The limitations of bendable and the hard disk drive standards has been addressed above.

3. Claim 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood, as discussed above, in view of Hirasawa (US 6,250552).

The teachings of Liu/Wood have been discussed above.

Liu/Wood are silent to the coating on both surfaces.

Hirasawa teaches magnetic cards can have magnetic storage on both sides (col 1, lines 30+). Accordingly, it would have been obvious to have the coating on both surfaces when both surfaces have a recording medium.

At the time the invention was made it would have been obvious to combine the teachings of Liu/Wood wit those of Hirasawa.

One would have been motivated to do this to have a card that does not require such precise orientation (can be inserted either way into a reader since a magnetic storage is on both sides) or one that can have increased data storage, as some cards with dual storage can be linked to separate accounts.

Though Hirasawa teaches stripes, it is believed to be applicable to other track orientations, including rings/arcuate surfaces as the same principles are believed to apply.

4. Claim 26 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood, as discussed above, in view of Bajorek (US 6,482,330).

The teachings of Liu/Wood have been discussed above.

Liu/Wood are silent to a bonded lubricant layer formed on the outer surface having a thickness less than the protective coating.

Film layers are known in the art for increasing density and providing relief from size (excess). Bajorek teaches a lubricant provided to the protective overcoat (col 4, lines 52+).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood with those of Bajorek.

One would have been motivated to do this for data density, relief, and ease of use/durability.

Though silent to the thickness, the Examiner notes it would have been obvious to be thinner than the protective layer as the lubricant is employed for reduced friction surface and as being able to be applied by wiping onto the protective layer it would obviously be thinner than a multipart protective layer with magnetic properties. The selection of an optimum value/range

when general teaches are taught by the prior art, is within the ordinary skill in the art. Such a layer can be interpreted as a protective component.

Re claim 49, Liu/Wood are silent to oxide layers.

Bajorek teaches such limitations (col 1, lines 15+).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood with those of Bajorek for data storing ease.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood, as discussed above, in view of Mizoguchi et al. (US 5,689,105).

The teachings of Liu/Wood have been discussed above.

Liu/Wood are silent to the station moving relative to the substrate/card.

Mizoguchi et al. teaches such limitations (abstract).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood with those of Mizoguchi et al.

One would have been motivated to do this to have an alternative means to read the card, and to accurately process with the card (with conformity).

6. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood, as discussed above, in view of Nishiyama et al. (US 5,721,942)

The teachings of Liu/Wood have been discussed above.

Liu/Wood are silent to the claimed density range.

Nishiyama et al. teaches such a range (claim 4)

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood with those of Nishiyama et al. in order for increased storage capacity.

7. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood, as discussed above, in view of Meeks (US 6,268,919).

The teachings of Liu/Wood have been discussed above.

Liu/Wood are silent to the plating.

Meeks teaches such limitations (col 1, lines 43-50).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood with those of Meeks since plating is well known and conventional for disks/drives to lead to desired properties for magnetic surfaces.

8. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood, as discussed above, in view of Foley (US 4,518,627).

The teachings of Liu/Wood have been discussed above.

Liu/Wood are silent to the web coating.

Foley teaches such limitations (col 3, lines 15-35 and abstract).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood with those of Foley.

One would have been motivated to do this to produce a durable magnetic medium, as is commonly done in the art.

9. Claims 1, 4-10, 16-17, 19, 21-25, 27-28, 30, and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (US 2001/0052543) in view of Wood (US 5,041,922) and Levy (US 4884507)

Re claim 1, Liu teaches a portable card adapted to be used in a card processing system having a data processing station comprising a data storage device adapted to interact with the data processing station when the portable processing station and card are moved relative to each other, a substrate having a generally rectangular shape, and magnetic material for storing signals disposed such as on an arcuate shaped track (FIG. 2d+). Though silent to high density/high coercivity material, it would have been obvious to one of ordinary skill in the art to use such a material, for its known benefits for increased data storage.

Liu is silent to the protective coating as claimed.

Wood teaches magnetic storage for a disc/tape/etc. (interpreted as suitable for a card) and the protective coating having the claimed high density high coercivity material and the protective coating having a magnetically permeable magnetically saturable material (abstract), where the Examiner has interested both layers as forming the protective layer (13,14 form a protective layer). Though silent to being hard and abradable, a protective coating would obviously meet such limitations in order to further protect the card. The Examiner notes that the language regarding the selection of the thickness of the layer is not germane to the patentability of the device itself, and the prior art is interpreted to meet the structural limitations. Regardless, it would have been obvious to one of ordinary skill in the art to have a thickness that is not too thick to prevent signals but not too thing to be worn off, in order for the card and processing

station to function, such selection of a range, where the general conditions of a claim are disclosed by the prior art, involves only routine skill in the art.

Re claims 4-9, the Examiner notes that such limitations regarding the orientation and number of tracks is believed to be taught by Liu, where the tracks are interpreted to extend between the sides, are enclosed by the card and hence extend or are located centrally as claimed, and also Liu teaches the shape of the card, which is conventional in the art.

Re claims 10 and 16-17, the limitations have been discussed above.

Re claim 19, though the film 13 of Wood et al. is silent to being thin, the Examiner notes that it is taught as being plated or sputtered. Therefore, it would have been obvious for such methods to produce a thing film. One would have been motivated to have a thin film, for reduction in size/cost and the use of common manufacturing techniques.

Re claim 21, though silent to a non-magnetic friction reducing layer on one of the layers, the Examiner notes that cards are finished to have a smooth/non magnetic friction reducing layer to effect ease of use of the card, looks, and transporting it through a reader, and therefore such modification is an obvious expedient for such expected results. Such a layer can be interpreted as part of a protection layer as it imparts some protection inherently to the card.

Re claim 22, the Examiner notes that cards are interpreted as cleanable.

Re claim 23, a substrate is understood to have two surfaces, and as such, the protecting coating is therefore applied to one of them (directly or indirectly).

Re claims 24-25, though silent to a recording medium on both sides (which would necessitate the protection layer on both sides and hence meet the limitations), the Examiner notes those cards with magnetic storage on both sides are well known and conventional in the art. One

would have been motivated to have such a card for increased data storage, to make orientation easier when reading, and to possibly store more than one account on a card.

Re claims 27-28 and 30, Wood teaches such limitations (claim 16 and FIG. 1), and it is conventional in the art for relative movement to enable data flow, such as conventional readers/cards employ.

Re claim 47-48, Wood teaches sputtering, as discussed above, as a means to easily form a thin layer. Though silent to plating, the Examiner notes plating is also a well known means to form a layer, and hence an obvious expedient to one of ordinary skill in the art to form a magnetic thin layer.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu with those of Wood.

One would have been motivated to do this to provide coatings, enable data flow, employ conventional processing techniques, etc. to provide expected results of a durable, easy to use, reliable card.

Re claim 1, though silent to the data storage device being bendable, the Examiner notes that Liu teaches the card can be of plastic and dimensioned to match a credit card. Therefore, as credit cards are plastic and flexible (bendable into an arcuate shape, including the storage media thereon), it would have been obvious to one of ordinary skill in the art, to use a known technique of flexible/bendable plastic cards with the teachings of Liu in order to have a data card with flexibility/bendability, which can contribute to durability. Bending of a credit card/data card with the storage thereon would also bend the storage thereon in an arcuate shape, thus producing

expected results. Alternatively, as the magnetic tracks are arcuate, they can be interpreted as bendable, as they are bent/formed into the arcuate shape on the card itself.

Re claim 10, though silent to storing magnetic signals in a manner compliant with ANSI/ISO/IEC standards, the Examiner notes that the magnetic signals of Liu are stored/written to tracks, for example. Storing/writing to tracks of a data storage card is a manner that is compliant with ANSI/ISO/IEC standards, as credit cards have magnetic signals written/stored to tracks which are read by a processing station/head. As the claims are sufficiently broad, they do not recite what "a manner compliant" refers to. For purposes of Examination, the Examiner has interpreted that as the teachings of Liu teach writing/storing signals to tracks, this is a manner of for storing magnetic signals that is compliant with (how) magnetic signals are stored for compliant credit cards, as known in the art.

Liu/Wood are silent to the newly added limitations of the protective housing.

Levy teaches such limitations (FIG. 1) via a case that is able to store cards and that opens and closes thereby providing the claimed access.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood with those of Levy, for additional protection.

Re claims 1 and 10, and the newly added limitations regarding the standards and bending, the Examiner notes that these limitations have been addressed in the action above, wherein the substrate is interpreted as bendable for durability/flexibility, and that arcuate/tracks being read by a reader/head, are interpreted as being read in a manner/formed in a manner, compliant with the standards.

3. Claim 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/Levy, as discussed above, in view of Hirasawa (US 6,250552).

The teachings of Liu/Wood/Levy have been discussed above.

Liu/Wood/Levy are silent to the coating on both surfaces.

Hirasawa teaches magnetic cards can have magnetic storage on both sides (col 1, lines 30+). Accordingly, it would have been obvious to have the coating on both surfaces when both surfaces have a recording medium.

At the time the invention was made it would have been obvious to combine the teachings of Liu/Wood/Levy with those of Hirasawa.

One would have been motivated to do this to have a card that does not require such precise orientation (can be inserted either way into a reader since a magnetic storage is on both sides) or one that can have increased data storage, as some cards with dual storage can be linked to separate accounts.

Though Hirasawa teaches stripes, it is believed to be applicable to other track orientations, including rings/arcuate surfaces as the same principles are believed to apply.

4. Claim 26 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/Levy, as discussed above, in view of Bajorek (US 6,482,330).

The teachings of Liu/Wood/Levy have been discussed above.

Liu/Wood/Levy are silent to a bonded lubricant layer formed on the outer surface having a thickness less than the protective coating.

Film layers are known in the art for increasing density and providing relief from size (excess). Bajorek teaches a lubricant provided to the protective overcoat (col 4, lines 52+).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/Levy with those of Bajorek.

One would have been motivated to do this for data density, relief, and ease of use/durability.

Though silent to the thickness, the Examiner notes it would have been obvious to be thinner than the protective layer as the lubricant is employed for reduced friction surface and as being able to be applied by wiping onto the protective layer it would obviously be thinner than a multipart protective layer with magnetic properties. The selection of an optimum value/range when general teaches are taught by the prior art, is within the ordinary skill in the art. Such a layer can be interpreted as a protective component.

Re claim 49, Liu/Wood/Levy are silent to oxide layers.

Bajorek teaches such limitations (col 1, lines 15+).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/Levy with those of Bajorek for data storing ease.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/Levy, as discussed above, in view of Mizoguchi et al. (US 5,689,105).

The teachings of Liu/Wood/Levy have been discussed above.

Liu/Wood/Levy are silent to the station moving relative to the substrate/card.

Mizoguchi et al. teaches such limitations (abstract).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/Levy with those of Mizoguchi et al.

One would have been motivated to do this to have an alternative means to read the card, and to accurately process with the card (with conformity).

6. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/Levy, as discussed above, in view of Nishiyama et al. (US 5,721,942)

The teachings of Liu/Wood/Levy have been discussed above.

Liu/Wood/Levy are silent to the claimed density range.

Nishiyama et al. teaches such a range (claim 4)

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/Levy with those of Nishiyama et al. in order for increased storage capacity.

7. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/Levy, as discussed above, in view of Meeks (US 6,268,919).

The teachings of Liu/Wood/Levy have been discussed above.

Liu/Wood/Levy are silent to the plating.

Meeks teaches such limitations (col 1, lines 43-50).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/Levy with those of Meeks since plating is well known and conventional for disks/drives to lead to desired properties for magnetic surfaces.

8. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/Levy, as discussed above, in view of Foley (US 4,518,627).

The teachings of Liu/Wood/Levy have been discussed above.

Liu/Wood/Levy are silent to the web coating.

Foley teaches such limitations (col 3, lines 15-35 and abstract).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/Levy with those of Foley.

One would have been motivated to do this to produce a durable magnetic medium, as is commonly done in the art.

9. Claims 1, 4-10, 16-17, 19, 21-25, 27-28, 30, and 47-48 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (US 2001/0052543) in view of Wood (US 5,041,922) and Porter (US 4202445)

Re claim 1, Liu teaches a portable card adapted to be used in a card processing system having a data processing station comprising a data storage device adapted to interact with the data processing station when the portable processing station and card are moved relative to each other, a substrate having a generally rectangular shape, and magnetic material for storing signals disposed on an arcuate shaped track (FIG. 2d+). Though silent to high density/high coercivity material, it would have been obvious to one of ordinary skill in the art to use such a material, for its known benefits for increased data storage. Liu teaches credit card sizing as well.

Liu is silent to the protective coating as claimed.

Wood teaches magnetic storage for a disc/tape/etc. (interpreted as suitable for a card) and the protective coating having the claimed high density high coercivity material and the protective coating having a magnetically permeable magnetically saturable material (abstract), where the Examiner has interested both layers as forming the protective layer (13,14 form a protective layer). Though silent to being hard and abradable, a protective coating would obviously meet such limitations in order to further protect the card. The Examiner notes that the

language regarding the selection of the thickness of the layer is not germane to the patentability of the device itself, and the prior art is interpreted to meet the structural limitations. Regardless, it would have been obvious to one of ordinary skill in the art to have a thickness that is not too thick to prevent signals but not too thing to be worn off, in order for the card and processing station to function, such selection of a range, where the general conditions of a claim are disclosed by the prior art, involves only routine skill in the art.

Re claims 4-9, the Examiner notes that such limitations regarding the orientation and number of tracks is believed to be taught by Liu, where the tracks are interpreted to extend between the sides, are enclosed by the card and hence extend or are located centrally as claimed, and also Liu teaches the shape of the card, which is conventional in the art.

Re claims 10 and 16-17, the limitations have been discussed above.

Re claim 19, though the film 13 of Wood et al. is silent to being thin, the Examiner notes that it is taught as being plated or sputtered. Therefore, it would have been obvious for such methods to produce a thing film. One would have been motivated to have a thin film, for reduction in size/cost and the use of common manufacturing techniques.

Re claim 21, though silent to a non-magnetic friction reducing layer on one of the layers, the Examiner notes that cards are finished to have a smooth/non magnetic friction reducing layer to effect ease of use of the card, looks, and transporting it through a reader, and therefore such modification is an obvious expedient for such expected results. Such a layer can be interpreted as part of a protection layer as it imparts some protection inherently to the card.

Re claim 22, the Examiner notes that cards are interpreted as cleanable.

Re claim 23, a substrate is understood to have two surfaces, and as such, the protecting coating is therefore applied to one of them (directly or indirectly).

Re claims 24-25, though silent to a recording medium on both sides (which would necessitate the protection layer on both sides and hence meet the limitations), the Examiner notes those cards with magnetic storage on both sides are well known and conventional in the art. One would have been motivated to have such a card for increased data storage, to make orientation easier when reading, and to possibly store more than one account on a card.

Re claims 27-28 and 30, Wood teaches such limitations (claim 16 and FIG. 1), and it is conventional in the art for relative movement to enable data flow, such as conventional readers/cards employ.

Re claim 47-48, Wood teaches sputtering, as discussed above, as a means to easily form a thin layer. Though silent to plating, the Examiner notes plating is also a well known means to form a layer, and hence an obvious expedient to one of ordinary skill in the art to form a magnetic thin layer.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu with those of Wood.

One would have been motivated to do this to provide coatings, enable data flow, employ conventional processing techniques, etc. to provide expected results of a durable, easy to use, reliable card.

Re claim 1, though silent to the data storage device being bendable, the Examiner notes that Liu teaches the card can be of plastic and dimensioned to match a credit card. Therefore, as credit cards are plastic and flexible (bendable into an arcuate shape, including the storage media

thereon), it would have been obvious to one of ordinary skill in the art, to use a known technique of flexible/bendable plastic cards with the teachings of Liu in order to have a data card with flexibility/bendability, which can contribute to durability. Bending of a credit card/data card with the storage thereon would also bend the storage thereon in an arcuate shape, thus producing expected results. Alternatively, as the magnetic tracks are arcuate, they can be interpreted as bendable, as they are bent/formed into the arcuate shape on the card itself.

Re claim 10, though silent to storing magnetic signals in a manner compliant with ANSI/ISO/IEC standards, the Examiner notes that the magnetic signals of Liu are stored/written to tracks, for example. Storing/writing to tracks of a data storage card is a manner that is compliant with ANSI/ISO/IEC standards, as credit cards have magnetic signals written/stored to tracks. As the claims are sufficiently broad, they do not recite what "a manner compliant" refers to. For purposes of Examination, the Examiner has interpreted that as the teachings of Liu teach writing/storing signals to tracks, this is a manner of for storing magnetic signals that is compliant with (how) magnetic signals are stored for compliant credit cards, as known in the art.

Liu/Wood are silent to the newly added limitations of the protective housing.

Porter teaches such limitations (abstract) via a card holder that is able to hold credit/smart card sized cards (FIG. 1-2).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood with those of Porter, for additional protection.

Re claims 1 and 10, the limitations regarding the bending and the standards has been discussed above, wherein the substrate is interpreted as bendable for durability/flexibility, and

that arcuate/tracks being read by a reader/head, are interpreted as being read in a manner/formed in a manner, compliant with the standards.

10. Claim 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/ Porter, as discussed above, in view of Hirasawa (US 6,250552).

The teachings of Liu/Wood/ Porter have been discussed above.

Liu/Wood/ Porter are silent to the coating on both surfaces.

Hirasawa teaches magnetic cards can have magnetic storage on both sides (col 1, lines 30+). Accordingly, it would have been obvious to have the coating on both surfaces when both surfaces have a recording medium.

At the time the invention was made it would have been obvious to combine the teachings of Liu/Wood// Porter with those of Hirasawa.

One would have been motivated to do this to have a card that does not require such precise orientation (can be inserted either way into a reader since a magnetic storage is on both sides) or one that can have increased data storage, as some cards with dual storage can be linked to separate accounts.

Though Hirasawa teaches stripes, it is believed to be applicable to other track orientations, including rings/arcuate surfaces as the same principles are believed to apply.

11. Claim 26 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/ Porter, as discussed above, in view of Bajorek (US 6,482,330).

The teachings of Liu/Wood/ Porter have been discussed above.

Liu/Wood/ Porter are silent to a bonded lubricant layer formed on the outer surface having a thickness less than the protective coating.

Film layers are known in the art for increasing density and providing relief from size (excess). Bajorek teaches a lubricant provided to the protective overcoat (col 4, lines 52+).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/ Porter with those of Bajorek.

One would have been motivated to do this for data density, relief, and ease of use/durability.

Though silent to the thickness, the Examiner notes it would have been obvious to be thinner than the protective layer as the lubricant is employed for reduced friction surface and as being able to be applied by wiping onto the protective layer it would obviously be thinner than a multipart protective layer with magnetic properties. The selection of an optimum value/range when general teaches are taught by the prior art, is within the ordinary skill in the art. Such a layer can be interpreted as a protective component.

Re claim 49, Liu/Wood/ Porter are silent to oxide layers.

Bajorek teaches such limitations (col 1, lines 15+).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/ Porter with those of Bajorek for data storing ease.

12 Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/ Porter, as discussed above, in Porter of Mizoguchi et al. (US 5,689,105).

The teachings of Liu/Wood/ Porter have been discussed above.

Liu/Wood/ Porter are silent to the station moving relative to the substrate/card.

Mizoguchi et al. teaches such limitations (abstract).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/ Porter with those of Mizoguchi et al.

One would have been motivated to do this to have an alternative means to read the card, and to accurately process with the card (with conformity).

13 Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/ Porter, as discussed above, in view of Nishiyama et al. (US 5,721,942)

The teachings of Liu/Wood/ Porter have been discussed above.

Liu/Wood/ Porter are silent to the claimed density range.

Nishiyama et al. teaches such a range (claim 4)

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/ Porter with those of Nishiyama et al. in order for increased storage capacity.

14 Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/ Porter, as discussed above, in view of Meeks (US 6,268,919).

The teachings of Liu/Wood/ Porter have been discussed above.

Liu/Wood/ Porter are silent to the plating.

Meeks teaches such limitations (col 1, lines 43-50).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/ Porter with those of Meeks since plating is well known and conventional for disks/drives to lead to desired properties for magnetic surfaces.

15. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu/Wood/ Porter, as discussed above, in view of Foley (US 4,518,627).

The teachings of Liu/Wood/ Porter have been discussed above.

Liu/Wood/ Porter are silent to the web coating.

Foley teaches such limitations (col 3, lines 15-35 and abstract).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Liu/Wood/ Porter with those of Foley.

One would have been motivated to do this to produce a durable magnetic medium, as is commonly done in the art.

***Response to Arguments***

16. Applicant's arguments filed have been fully considered but they are not persuasive. The Examiner has addressed the new limitations as above. In response to the Applicants argument that the prior art does not teach bendable substrates, the Examiner disagrees, as the cards are interpreted as generally bendable, as understood in the art, especially as the claims do not recite a degree of specify how bendable the substrates are. In response to the arguments regarding the ANSI/ISO/IEC hard disk drive standards, the Examiner believes the arguments/art from the prior rejection are applicable, sine the Examiner has broadly interpreted such limitations to mean that tracks are read by a read head/formed on a substrate to be read by a read head (which is a manner compliant with the standards). The limitations reciting the standards are sufficiently broad to be read this way.

***Conclusion***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL WALSH whose telephone number is (571)272-2409. The examiner can normally be reached on M-F 9am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Paik can be reached on 571-272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL WALSH/
Primary Examiner, Art Unit 2887